REMARKS/ARGUMENTS

Claims 1-20 are pending in the present application. The applicant amends independent claims 1, 15, and 20. Dependent claims 2-14, and 16-20 remain as originally presented.

The examiner rejected claim 1 under 35 U.S.C. 103(a) as being unpatentable over Gilhousen (US Patent No. 5,970,413) in view of Soliman (US Patent No. 6,166,685 or '229) or WO 99/47943). The examiner rejected claim 20 under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art in view of Soliman, et al. (US Patent No. 6,081,229). The examiner also rejected claim 20 under 35 U.S.C. 103(a) as being unpatentable over Soliman (U.S. Patent No. 6,166,685) in view of Soliman, et al. (US Patent No. 6,081,229).

The examiner's office action is ambiguous for the following reasons.

a. The examiner only rejected claims 1 and 20, as noted above, but mentions reasons for rejecting claims 2-14, claim 15, and claims 16-19, without citing references and basis for rejecting those claims.

b. The examiner cited references and basis for rejecting claims 1 and 20, as noted above, and supports the rejections by citing a teaching or suggestion in one or more references related to determining a position of a mobile station. However, the examiner did not cite a teaching or suggestion in one or more references for the concept of "calibrating base stations in a wireless telecommunications network to Global Positioning System (GPS) time," as claimed in claims 1 and 20, as well as in claim 15.

c. The examiner rejected claims 2-14 and 16-19, without references and basis, because a combination of references teaches a number of satellites and use thresholds. However, the examiner did not cite a teaching or suggestion in one or more references of the limitations described in each of claims 2-14 and 16-19.

In the interest of advancing the prosecution of the present application to allowance, the applicant provides a response to the examiner's rejection of claims 1 and 20 based on the content of the cited references.

The four cited references teach various methods for determining a position of a mobile station in a cellular telephone system.

In U.S. Patent No. 6,166,685 ('685 patent), Soliman generally teaches in the Abstract:

"Next, one or more range measurements are made using signals transmitted between the mobile unit and the infrastructure. A positional difference between the initial position and a current position of the mobile station is estimated using the one or more range measurements, wherein only range measurements made from signals transmitted between the mobile unit and the infrastructure are used to perform the estimating. An accuracy value is next determined for the estimated positional measurement, and the accuracy value is compared to a threshold to determine whether the estimated positional measurement has an acceptable accuracy. If the estimated positional measurement has an acceptable accuracy, then the initial position of the mobile unit is updated using the estimated positional measurement and the process is repeated using only range measurements made from signals transmitted between the mobile unit and the infrastructure; otherwise, a new initial position is determined from the earth-orbiting satellites and the process is repeated."

More particularly, Soliman teaches at col. 4, lines 33-63 calibrating the infrastructure system:

"In step 108, the infrastructure system is aligned or calibrated by comparing the positional determinations (P.sub.0 (GPS), P.sub.0 (INFR)) made in steps 102 and 106. In a preferred embodiment, the range measurements used for determining the coordinates associated with the two positional determinations (P.sub.0 (GPS), P.sub.0 (INFR)) are compared, and the residual values that result from this comparison correspond to the difference (R1-R2) between a first range (R1) from a reference point (e.g., a base station) to P.sub.0 (GPS) and a second range (R2) from the same reference point to P.sub.0 (INFR). This difference is then divided by the speed of light in order to arrive at a calibration value that represents the time difference between the propagation time of a signal transmitted between a base station and P.sub.0 (GPS), and the propagation time of a signal transmitted between the base station and P.sub.0 (INFR). This calibration value is then used by the present invention to adjust range measurements made using the infrastructure on the forward and reverse links associated with the mobile station as described more fully below.

In step 110, the calibration value is compared to a threshold in order to assess the accuracy of the positional determination (P.sub.0 (INFR)) made using only the infrastructure measurements in step 106. If the calibration measurement exceeds the threshold, this indicates that the positional determination (P.sub.0 (INFR)) made using only the infrastructure measurements was sufficiently inaccurate that further updates of the initial positional measurement should not be made using infrastructure measurements only. In such cases, the system returns to step 102, and the position of the mobile station is updated simply by taking a new set of GPS measurements."

The applicants amend claims 1, 15, and 20 to further define steps for "calibrating base stations in a wireless telecommunications network to Global Positioning System (GPS) time," as claimed in claims 1, 15, and 20, by adding the following limitations:

"storing the base station timing offsets in a calibration data base responsive to the step of computing;

determining base station timing offset statistics responsive to the step of storing; and

updating a base station's timing offset responsive to the step of determining."

Support for this amendment may be found in the present specification, for example, on page 11, par. 35.

The cited references do not teach or suggest, alone or in combination, the combination of limitations in independent claims 1, 15, or 20.

No new matter has been added by this amendment.

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Applicants therefore respectfully request that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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